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# Chippewa

## A New Soybean for Northern Iowa

by C. R. Weber

**C**HIPPEWA is a new soybean for extreme northern Iowa. It's high yielding and high in oil content. Chippewa is 5 days earlier than Blackhawk. So it should be of special interest to you if you live in an area where you want an earlier variety than Blackhawk. Chippewa is considered a replacement for Mandarin (Ottawa), Capital and older varieties of similar maturity.

Tests in Iowa reveal that Chippewa:

—outyields Mandarin (Ottawa) by an average of 5 bushels per acre and equals Blackhawk in yield;

—is 5 inches taller than Mandarin but 2 to 3 inches shorter than Blackhawk;

—matures about 4 days later than Mandarin and stands up as well as Mandarin but is 5 days earlier than Blackhawk and stands up slightly better;

—has an oil content about 1 percent higher than Mandarin and

about the same as that of Blackhawk.

### Its Background . . .

Lincoln and Richland were crossed at the Iowa Agricultural Experiment Station in 1941. The resulting hybrid was crossed back to Lincoln at Illinois. Since that backcross, thousands of selections have been made over a 13-year period. One of these selections became Chippewa. It is the fifteenth in a series of superior varieties developed in recent years for different soybean producing areas in the country.

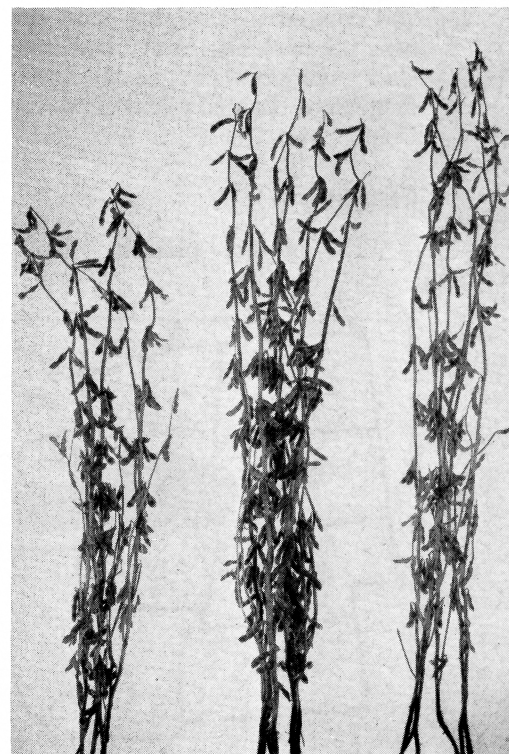
Testing and initial increase of Chippewa were done cooperatively by a number of agricultural experiment stations of the North Central Region and the United States Regional Soybean Laboratory. Participants in this cooperative organization are the Field Crops Research Branch, Agricultural Research Service, USDA, and 24 state agricultural experiment stations.

### What It's Like . . .

Some of the plant and seed characteristics of Chippewa are hard to distinguish from Lincoln,

one of its parents, and Clark, its "sister." You may remember that Clark resulted from the same initial cross. Like Clark, Chippewa has "three-quarters blood" of Lincoln. But Chippewa matures almost a month earlier than Clark.

Chippewa is medium tall and is usually rather erect in growth, with brown pubescence (hairs) on the stems and pods. It has purple flowers and yellow seed with a black hilum or seed scar.



A comparison at maturity of Mandarin (Ottawa) at left, Chippewa (center) and Blackhawk (right). Note darker color of Chippewa as compared with other two. Chippewa bears pods higher off the ground than does Mandarin.

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**TABLE 1. Record of Chippewa and Other Varieties in Iowa Over an 8-Year Period. (Northern Iowa, 1948-55, Average of 15 tests)**

Variety	Bushels per acre	Lodging score <sup>1</sup>	Maturity date	Height (inches)
Chippewa . . . . .	29.1	1.3	Sept. 17	32
Blackhawk . . . . .	29.0	1.5	Sept. 22	35
Earlyana . . . . .	27.3	2.4	Sept. 24	40
Monroe . . . . .	26.2	2.1	Sept. 21	39
Mandarin (Ottawa) . . . . .	24.1	1.2	Sept. 13	27

<sup>1</sup>Lodging score ranges from 1.0 (with almost all plants erect) to 5.0 (with almost all plants down badly).

**TABLE 2. Record of Chippewa and Other Varieties in Regional Tests.<sup>1</sup>**  
(Combined results from Canada, Indiana, Illinois, Iowa, Minnesota, Ohio, Pennsylvania, South Dakota and Wisconsin over a 6-year period, 1949-54)

Variety	Bushels per acre	Lodging score <sup>2</sup>	Maturity date <sup>3</sup>	Height (inches)	Seed quality <sup>4</sup>	Seed per lb.	Protein (%) <sup>5</sup>	Oil (%) <sup>5</sup>
No. of tests:	89	75	65	83	76	89	89	89
Chippewa .....	30.3	1.5	+ 3.1	33	1.8	2,985	41.1	20.4
Blackhawk .....	30.2	1.9	+ 8.6	35	1.6	2,890	40.7	20.5
Earlyana .....	28.2	3.0	+10.2	38	2.2	2,835	42.5	19.7
Monroe .....	27.9	2.4	+ 6.6	39	1.5	3,000	42.2	19.6
Mandarin (Ottawa) .....	26.8	1.3	0	28	1.9	2,440	42.6	19.5

<sup>1</sup>Data from United States Regional Soybean Laboratory Report, "Results of the Cooperative Uniform Soybean Tests, 1954. Part 1. North Central States." R.S.L.M. 174. March 1955.

<sup>2</sup>Lodging score ranges from 1.0 (with almost all plants erect) to 5.0 (with almost all plants down badly).

<sup>3</sup>Days earlier (-) or later (+) than Mandarin (Ottawa); Mandarin required 110 days to mature.

<sup>4</sup>A score from 1.0 (very good) to 5.0 (very poor) based upon seed development, wrinkling, damage and color of the seed.

<sup>5</sup>Protein and oil percentages determined on a moisture-free basis.

Results of Iowa tests with Chippewa are summarized in table 1; regional results are shown in table 2. The Iowa results, collected over the 8-year period 1948-55, agree well with the regional results which covered a much wider area of testing—nearly 90 tests of Chippewa in comparison with standard varieties.

Chippewa yielded 5 bushels more per acre than Mandarin (Ottawa) and equaled the yield of Blackhawk. Yet, Chippewa is at least 5 days earlier than Blackhawk. Chippewa stands up well and compares favorably with the best oil varieties in its maturity class. Chippewa's greater plant height is a decided advantage over Mandarin.

### Planting . . .

With normal planting dates,

Chippewa shouldn't be considered a full-season variety in the northern tier of Iowa counties. But it should be particularly adapted on muck and peat soils of northern Iowa and in northeastern Iowa where cold, wet soils delay maturity.

When planted in mid-May in northern Iowa, Chippewa might have an additional value in some crop rotations. Winter wheat, for example, could follow such an early maturing soybean. Chippewa can also be used when planting has been unavoidably delayed in its best area of adaptation.

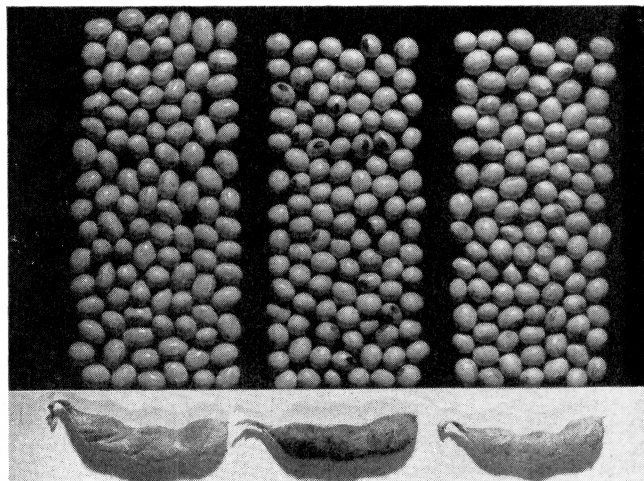
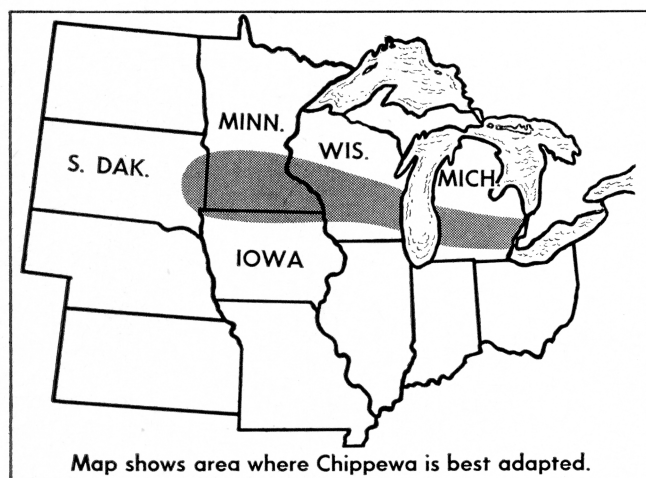
### May Replace Old Kinds

We don't expect or recommend Chippewa to replace Blackhawk, though it probably will share in the large acreage now planted to Blackhawk in extreme northern

Iowa. We do expect Chippewa to replace Mandarin (Ottawa), Capital and older varieties of similar maturity.

Chippewa has been increased by state agricultural experiment stations in Michigan, Minnesota, Ohio, South Dakota, Wisconsin, Iowa and in Ontario, Canada. Planting stocks for general use in 1956 are available in greater quantity in the states to the north than in Iowa. A very limited quantity of Chippewa in the state may make further increase necessary in 1956.

If you live in extreme northern Iowa and are interested in trying new varieties, we recommend that you try Chippewa. We believe that it has a place and is another step toward reducing production costs per bushel in its adapted area.



**LEFT:** Map shows portions of the five states where Chippewa is best adapted. **RIGHT:** Here is a comparison of 100 seeds and a pod from each of Mandarin (Ottawa) at left, Chippewa (center) and Blackhawk (right). Chippewa has the smallest seed of these three varieties. Notice especially its black hilum (seed scar) and its roundness as compared with Mandarin (Ottawa) shown at left.